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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/475,696	12/30/1999	DARRYL L. DEFREESE	A-6307	6730
5642	7590	12/14/2007	EXAMINER	
SCIENTIFIC-ATLANTA, INC. INTELLECTUAL PROPERTY DEPARTMENT 5030 SUGARLOAF PARKWAY LAWRENCEVILLE, GA 30044			PICH, PONNOREAY	
		ART UNIT	PAPER NUMBER	2135
		NOTIFICATION DATE	DELIVERY MODE	
		12/14/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/475,696	DEFREESE ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Ponnoreay Pich	2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 October 2007.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 72-84 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 72-84 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 10/07.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/1/07 has been entered.

### ***Information Disclosure Statement***

The IDS submitted by applicant on 10/1/07 has been considered.

### ***Response to Amendment and Arguments***

Applicant's amendments and arguments were fully considered, but are moot in view of new rejections made below in response to the amendments.

As a preliminary matter, it is noted that applicant once again presents arguments that the examiner has not accorded the term "entitlement unit number" with what applicant believes is the definition of the term when considering the specification taken as a whole. However, the examiner notes that the applicant's specification does not explicitly define what is meant by "entitlement unit number". Entitlement unit number was not a common term in the art at the time applicant's invention was made and at best any arguments applicant has presented so far has only stated what an entitlement unit number may be or could be, not what it is. While it is recognized that applicant may be his/her own lexicographer, it is important that any term that applicant wishes to apply a special meaning to be specifically and definitely defined so that others would be

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properly apprised of the true scope of the applicant's invention as defined by the claims.

It is respectfully requested that applicant clarify what is an entitlement unit number.

Applicant's response should contain a specific definition consistent with the specification considered as a whole—stating what an "entitlement unit number" is rather than what it could be, may be, or might be. The examiner submits that stating what an entitlement unit number may be does not exclude it from being something else and as such one cannot be properly apprised of the true scope of any claim which uses the term "entitlement unit number".

***Claim Rejections - 35 USC § 112***

Claims 72-84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claims 72-84 either directly or via dependency uses the term "entitlement unit number". Entitlement unit number was not a common term in the art at the time applicant's invention was made. While it is recognized that applicant can be his/her own lexicographer, it is important that applicant provide a specific and definite definition for any terms created by applicant. Such a definition does not appear to exist in the specification for "entitlement unit number". Further, applicant's arguments presented thus far has only stated what an entitlement unit number may be, not what it is. As such, the scope of the invention as defined by

claims 72-84 cannot be properly determined. Applicant is respectfully requested to clarify for record, what an entitlement unit number is.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

It is noted that with respect to the current application, one of ordinary skill in the art is determined to be someone with a BS in Electrical/Computer Engineering and has experience designing cable television transmission/receiving systems (or someone with equivalent industry experience).

Claims 72, 74-76, 79, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al (US 4,599,647) in view of applicant's admittance of prior art, herein referred to as AAPA, in further view of Crowther et al (US 4,937,866) as evidenced by Wasilewski (US 5,420,866) and further in view of Urakoshi et al (US 6,067,564).

**Claims 72 and 79:**

As per claim 72, George discloses:

1. Associating services with tier data, a tier data corresponding to a particular package of bundled services (col 7, lines 42-44).

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2. Providing the terminal with a tier table that translates universal service identification numbers to tier data (col 7, lines 55-67). *The cited portion discloses that a subscription table is used to determine if the tier the user is trying to access is allowed or not. To determine which tier the user is trying to access, one must first determine which channel, i.e. universal service identification number, belongs to which tier. This implies the use of a tier table that translates channel number to tier data.*
3. Providing the terminal with an authorized tier number, wherein responsive to a user selecting a given service, the terminal determines whether the terminal is authorized to access the give service using the tier table, and the authorized tier number and displays the given service (col 7, lines 55-67).

George does not explicitly disclose:

1. The tier data is an entitlement unit number.
2. The tier table is an entitlement unit table.
3. The entitlement unit number is carried with at least one encrypted control word in a payload of an entitlement control message (ECM).
4. Providing the terminal with an electronic program guide that associates universal service identification numbers to services.
5. Responsive to the user selecting a given service, the terminal determines whether the terminal is authorized to access the given service also using the electronic program guide.

However, AAPA discloses that tier data being an entitlement unit number, which corresponds to a particular package of bundled services was known in the art at the time applicant's invention was made (p2, lines 1-4). It would have been obvious to one of ordinary skill in the art to utilize numbers, i.e. entitlement unit numbers, as tier data based on AAPA's teachings. The rationale for why it would have been obvious for one of ordinary skill to do so is that representing tier data using numbers is nothing more than simple substitution of one known element for another to obtain predictable results. George does not limit what format tier data is in, while AAPA discloses that tier data may be represented as numbers—using numbers as tier data would yield what applicant seems to be stating that an entitlement unit number could be. One should understand that in representing tier data as numbers, then the tier table implied by George could then be considered an entitlement unit table.

With respect to the limitation that the entitlement unit number is carried with at least one encrypted control word in a payload of an ECM, Crowther discloses encrypted control words being transmitted to a receiver in the payload of an ECM (col 1, lines 36-44). The control words are utilized to control which tier of programming a receiver may access (col 1, line 36-col 2, line 4). At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to further modify George's invention such that encrypted control words were transmitted within the payload of an ECM. One skilled would have been motivated to do so because use of control words in ECM's was the standard way of controlling access to scrambled programming in the cable industry

at the time applicant's invention was made. One skilled would have been motivated to encrypt the control word because it would prevent the unauthorized individuals from gaining access to the control words, which would allow them to decrypt specific programs. Further, it would have been obvious in light of Crowther's teachings to include entitlement unit numbers also within the payload of an ECM, along with the encrypted control word. One skilled would have been motivated to do so because as evidenced by Wasilewski, the content or format of an ECM is left to each individual vendor to decide (Wasilewski: col 4, lines 26-35). Since an entitlement unit number (in the form of tier number) is a type of conditional access information, it would have been obvious to one of ordinary skill in the art to at least try to send entitlement unit numbers in an ECM since an ECM is used to carry conditional access information (Wasilewski: col 4, lines 7-12).

As per the last two limitations discussed above that are not explicitly taught by George, they are made obvious over Urakoshi's teachings. Urakoshi discloses providing the terminal with an electronic program guide that associates universal service identification numbers (i.e. channel number) to services (Fig 2; Fig 6; Fig 12; and col 8, lines 49-55). Urakoshi further discloses responsive to a user selecting a given service, the terminal determines whether the terminal is authorized to access the given service using the electronic program guide (Fig 5; col 7, lines 11-42; and col 8, lines 2-6) and displays the given service (col 2, lines 9-17). At the time applicant's invention was made, it would have been obvious, based on Urakoshi's additional teachings, to further modify George's invention according to the limitations recited in claim 72 by providing

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the terminal with an electronic program guide that associates universal service identification numbers (i.e. channel numbers) to entitlement unit numbers (i.e. tier numbers) and responsive to a user selecting a given service, the terminal determines whether the terminal is authorized to access the given service using the electronic program guide, the entitlement unit table, and the authorized entitlement unit number. One skilled would have been motivated to utilize an electronic program guide by the terminal to determine if it is authorized to access a given service as per Urakoshi's teachings because use of the program guide would provide data for programs in an easier to understand format for the user (col 1, lines 35-56).

Claim 79 recites a method substantially similar to what is recited in claim 72 and is rejected for similar reasons. Note that the claim 79 receives that which claim 72 provides.

**Claim 74:**

AAPA further discloses wherein a given entitlement unit number (i.e. tier number) is associated with a plurality of services (specification: p2, lines 1-4).

**Claim 75:**

George implicitly discloses wherein the terminal is authorized for a first group of services, the first group of services having a first tier data, and further including the step of providing the terminal with a second authorized tier data, wherein the second authorized tier is associated with a second group of services (col 7, lines 41-67). The subscription list disclosed by George implies that a terminal could be subscribed to more than one tier of programming. The tier data being entitlement unit number is

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obvious over AAPA's teachings as already discussed in the rejection of claim 72. As such, the limitations further recited in claim 75 are obvious over the teachings of George and AAPA.

**Claim 76:**

George does not explicitly disclose wherein the given service is associated with both the first authorized entitlement unit number and the second authorized entitlement unit number. However, official notice is taken that the limitation was well known in the art at the time applicant's invention was made. A service, i.e. a programming station or show or movie, may be assigned to more than one tier or shown on more than one channel, thus would be associated with more than one authorized entitlement unit numbers.

**Claim 81:**

George does not explicitly disclose storing the authorized entitlement unit number in a memory. However, official notice is taken that the limitation was well known in the art at the time applicant's invention was made, because tier authorization data is typically stored in a memory of a receiver and tier authorization data being a number, i.e. an entitlement unit number, is obvious over AAPA (p2, lines 1-4).

Claims 73, 77-78, 80, and 83-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al (US 4,599,647) in view of applicant's admittance of prior

art, herein referred to as AAPA, in further view of Crowther et al (US 4,937,866) as evidenced by Wasilewski (US 5,420,866) and further in view of Urakoshi et al (US 6,067,564) and further in view of Wasilewski (US 5,420,866).

**Claim 73 and 80:**

George does not explicitly disclose wherein the authorized entitlement unit number is provided to the terminal in an entitlement management message. However, Wasilewski discloses that it is often desirable to transmit authorization information dealing with tiers of programs to terminals in an EMM (col 4, lines 55-67).

At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to further modify George's invention such that the authorized entitlement unit number (i.e. authorized tier number) is provided to the terminal in an EMM. One skilled would have been motivated to do so because it was suggested by the MPEG-2 Systems Committee that information dealing with tiers of programming (i.e. entitlement unit number) is transmitted in an EMM (Wasilewski: col 4, lines 55-67).

**Claim 77:**

As per claim 77, George discloses wherein the terminal confirms that the terminal is authorized to access the given services using the second tier data and the authorized tier data (col 7, lines 42-67). Tier data being entitlement unit number is obvious over AAPA's teachings that tier data is a number (p2, lines 1-4). George does not explicitly disclose the following limitation, which are nonetheless disclosed by Wasilewski: providing the services in a stream of packets (Fig 2); and multiplexing the entitlement control messages for a given service into the stream of packets (Fig 3B and 7A). Since

as per the discussion in the rejection of claim 72 it is obvious to include entitlement unit numbers in ECM, it would also be obvious to have each entitlement control message include a second entitlement control number for similar reasons discussed in the rejection of claim 72. At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to further modify George's invention according to the limitations recited in claim 77 in light of Wasilewski's teachings cited above. One skilled would have been motivated to do so because cable system based on MPEG streams were commonly used at the time applicant's invention was made, thus would be likely to provide services and multiplex ECM's for a given service into packet streams in the manner disclosed by Wasilewski.

**Claim 78:**

As per claim 78, it was discussed already in the rejection of claim 72 why it would have been obvious to include an entitlement unit number in ECM's. If it is obvious to include one entitlement unit number in ECM's, it would be obvious to try to include a plurality of entitlement unit number in ECM's since George discloses that in a broadcast system, there are multiple tiers of programming (col 7, lines 42-67). Multiple tiers of programming imply multiple entitlement unit numbers that needs to be sent to the receiver.

**Claim 83:**

As per the limitation of wherein each ECM includes an entitlement unit number that is carried in the payload of the ECM, the limitation was previously discussed as

being obvious over George in view of AAPA further in view of Crowther as evidenced by Wasilewski (see discussion of claims 72 and 78 for example).

George and AAPA further makes obvious: responsive to determining that the terminal is authorized to access the given service, further includes the step of confirming that the terminal is authorized to access the given service based upon the entitlement unit number and the authorized entitlement unit number (George: col 7, lines 42-67 and AAPA: p2, lines 1-4). The cited portion of George discusses determining if a terminal is authorized based on tier data. Tier data being entitlement unit numbers is obvious to the portion of AAPA cited.

George does not explicitly disclose the following limitations which are disclosed by Wasilewski:

1. Receiving a stream of packets, the streams of packets including packets comprising the given service and entitlement control messages (ECMs) for the given service (Fig 6 and col 13, lines 41-43, and col 14, lines 5-9).
2. Responsive to determining that the terminal is authorized to access the given service, further including the steps of:
  - a. Parsing ECMs for the given service from the stream of packets (col 14, lines 5-9).
  - b. Responsive to confirming that the terminal is authorized further including the steps of:
    - i. Recovering the control words from the received ECM's (col 9, lines 41-47 and col 15, lines 6-14).

- ii. Decrypting the given service using the recovered control words (col 9, lines 41-47 and col 15, lines 6-14).
- iii. Displaying the given service (col 15, lines 6-14).

It would have been obvious to one of ordinary skill in the art to further modify George's invention using Wasilewski's teachings according to the limitations recited in claim 83. One of ordinary skill would have been motivated to incorporate Wasilewski's teachings for the same reasons discussed in claims 73 and 77.

**Claim 84:**

As per the limitation wherein the entitlement control message includes a plurality of entitlement unit numbers, it is similar to the limitation recited in claim 78 and is rejected for the same reasons. George further implicitly discloses the step of confirming that the terminal is authorized to access the given service further includes the step of: comparing each of the entitlement unit numbers with the authorized entitlement unit number until one of the entitlement unit numbers matches the authorized entitlement unit number, wherein the terminal is authorized to access the given service if there is a match (col 7, lines 42-67). Note that the tier data in George's invention being entitlement unit number is obvious over AAPA's additional teachings (p2, lines 1-4).

Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over George et al (US 4,599,647) in view of applicant's admittance of prior art, herein referred to as AAPA, in further view of Crowther et al (US 4,937,866) as evidenced by Wasilewski (US 5,420,866) and further in view of Urakoshi et al (US 6,067,564) and further in view of Chaney (US 6,035,037).

**Claim 82:**

George does not explicitly disclose wherein the memory is included in a secure microprocessor having input/output terminals, and the secure microprocessor is characterized by the memory being observable at the input/output terminals. However, Chaney discloses the memory is included in a secure microprocessor having input/output terminals (Fig 4 and col 6, lines 56-59) and the secure microprocessor is characterized by the memory being unobservable at the input/output terminal (col 9, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to further modify George's invention with Chaney's teachings according to the limitations recited in claim 82. One of ordinary skill would have been motivated to do so as Chaney discloses it would ensure that unauthorized users do not access entitlement data (col 9, lines 1-4).

***Conclusion***

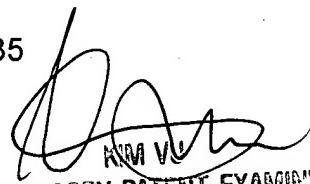
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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